

WHAT IS CLAIMED IS:

1. An image sensor comprising:

(a) a pixel array;

5 (b) a horizontal shift register horizontally scanning said pixel array;

(c) a vertical shift register vertically scanning said pixel array to cooperate with said horizontal shift register for selecting a pixel among said pixel array; and

(d) a horizontal blanking counter counting a horizontal blanking period.

10 2. The image sensor as set forth in claim 1, wherein said horizontal blanking counter is comprised of a shift register.

15 3. The image sensor as set forth in claim 1, further comprising a controller receiving an external trigger signal and transmitting said external trigger signal to said horizontal blanking counter, said horizontal blanking counter starting counting said horizontal blanking period on receipt of said external trigger signal.

20 4. The image sensor as set forth in claim 1, wherein said vertical shift register is activated in synchronization with activation of said horizontal blanking counter.

25 5. The image sensor as set forth in claim 1, wherein a first flag indicating that horizontal blanking is completed is formed in synchronization with said horizontal blanking counter counting up.

6. The image sensor as set forth in claim 5, wherein said horizontal shift register is activated when said first flag is formed.

7. The image sensor as set forth in claim 1, wherein a second flag indicating

that horizontal scanning is completed is formed in synchronization with said horizontal shift register counting up.

8. The image sensor as set forth in claim 7, wherein said horizontal blanking
5 counter is activated when said second flag is formed.

9. The image sensor as set forth in claim 7, wherein said vertical blanking
counter is activated when said second flag is formed.

10 10. The image sensor as set forth in claim 1, further comprising a first clock
generator which transmits a first clock signal to said vertical shift register, and a
second clock generator which transmits a second clock signal to said horizontal
shift register.

15 11. The image sensor as set forth in claim 1, wherein said horizontal
blanking counter transmits a first timing signal necessary for operating said pixel
array, to said horizontal and vertical shift registers, said horizontal and vertical
shift registers transmitting and receiving a second timing signal to and from each
other, based on said first timing signal.

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12. An image sensor comprising:

- (a) a pixel array;
- (b) a horizontal shift register horizontally scanning said pixel array;
- (c) a vertical shift register vertically scanning said pixel array to cooperate
25 with said horizontal shift register for selecting a pixel among said pixel array;
- (d) a horizontal blanking counter counting a horizontal blanking period, said
horizontal blanking counter transmitting a first timing signal necessary for
operating said pixel array, to said horizontal and vertical shift registers, said
horizontal and vertical shift registers transmitting and receiving a second timing

signal to and from each other, based on said first timing signal; and

(e) a switch which turns off a power source providing a power to a data line connected to a pixel in said pixel array, while a light is exposed to said pixel array.

5 13. The image sensor as set forth in claim 12, wherein said horizontal blanking counter is comprised of a shift register.

10 14. The image sensor as set forth in claim 12, further comprising a controller receiving an external trigger signal and transmitted said external trigger signal to said horizontal blanking counter, said horizontal blanking counter starting counting said horizontal blanking period on receipt of said external trigger signal.

15 15. The image sensor as set forth in claim 12, wherein said vertical shift register is activated in synchronization with activation of said horizontal blanking counter.

20 16. The image sensor as set forth in claim 12, wherein a first flag indicating that horizontal blanking is completed is formed in synchronization with said horizontal blanking counter counting up.

 17. The image sensor as set forth in claim 16, wherein said horizontal shift register is activated when said first flag is formed.

25 18. The image sensor as set forth in claim 12, wherein a second flag indicating that horizontal scanning is completed is formed in synchronization with said horizontal shift register counting up.

 19. The image sensor as set forth in claim 18, wherein said horizontal blanking counter is activated when said second flag is formed.

20. The image sensor as set forth in claim 18, wherein said vertical blanking counter is activated when said second flag is formed.

5 21. The image sensor as set forth in claim 12, further comprising a first clock generator which transmits a first clock signal to said vertical shift register, and a second clock generator which transmits a second clock signal to said horizontal shift register.

10 22. A method of driving an image sensor including (a) a pixel array, (b) a horizontal shift register horizontally scanning said pixel array, (c) a vertical shift register vertically scanning said pixel array to cooperate with said horizontal shift register for selecting a pixel among said pixel array, and (d) a horizontal blanking counter counting a horizontal blanking period,

15 said method comprising the steps of:

(a) said horizontal blanking counter transmitting a first timing signal necessary for operating said pixel array, to said horizontal and vertical shift registers; and

20 (b) said horizontal and vertical shift registers transmitting and receiving a second timing signal to and from each other, based on said first timing signal.

25 23. The method as set forth in claim 22, further comprising the steps of transmitting an external trigger signal to said horizontal blanking counter, said horizontal blanking counter starting counting said horizontal blanking period on receipt of said external trigger signal.

24. The method as set forth in claim 22, further comprising the step of activating said vertical shift register in synchronization with activation of said horizontal blanking counter.

25. The method as set forth in claim 22, further comprising the step of forming a first flag indicating that horizontal blanking is completed, in synchronization with said horizontal blanking counter counting up.

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26. The method as set forth in claim 25, further comprising the step of activating said horizontal shift register when said first flag is formed.

27. The method as set forth in claim 22, further comprising the step of forming a second flag indicating that horizontal scanning is completed, in synchronization with said horizontal shift register counting up.

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28. The method as set forth in claim 27, further comprising the step of activating said horizontal blanking counter when said second flag is formed.

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29. The method as set forth in claim 27, further comprising the step of activating said vertical blanking counter when said second flag is formed.

30. The method as set forth in claim 22, further comprising the step of transmitting a first clock signal to said vertical shift register, and transmitting a second clock signal to said horizontal shift register.

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31. The method as set forth in claim 22, further comprising the step of turning off a power source providing a power to a data line connected to a pixel in said pixel array, while a light is exposed to said pixel array.

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